

**IN THE ABSTRACT:**

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**ABSTRACT**

Functional assays that detect the effect of a particular compound or compounds on the activation of at least one human T2R polypeptide are provided. These assays include e.g., assays which detect the effect of said compound on intracellular calcium, second messengers such as cAMP, cGMP, current e.g., by use of voltage-clamp or patch-clamp, techniques, fluorescence polarization or FRET assays, and the like. These assays are useful in identifying compounds that putatively elicit or modulate (inhibit or enhance) bitter taste in human subjects, e.g. bitter taste blockers. The effect of identified compounds on taste may be further evaluated in human or animal taste tests.